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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,953	01/15/2002	William Kress Bodin	AUS920010780US1	4417

45993　　　7590　　　04/04/2007	EXAMINER	
IBM CORPORATION (RHF)	BROWN, VERNAL U	
C/O ROBERT H. FRANTZ	ART UNIT	PAPER NUMBER
P. O. BOX 23324	2612	
OKLAHOMA CITY, OK 73123		

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

		Application No.	Applicant(s)
Office Action Summary		10/046,953	BODIN, WILLIAM KRESS
		Examiner	Art Unit
		Vernal U. Brown	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This action is responsive to communication filed on January 18, 2007.

Response to Amendment

Applicant's arguments, filed January 18, 2007, with respect to the rejection(s) of

claim(s) 1-27 have been fully considered and are persuasive. Therefore, the rejection has been .

withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-3, 5, 10-15, 19-21, and 23-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Starner et al. US Patent 20020071277 in view of Pryor US Patent 6750848.

Regarding claims 1, and 5, Starner et al. teaches a method detecting free-space gesture

comprising the steps of providing a plurality of sensors such as plurality of lenses or a plurality

of mirrors mounted on a control system and the sensors are adapted to detect a gesturing

instrument (101) in proximity to the sensors (paragraph 020). Starner et al. teaches determining a

sensor sequence from a series of sensor detection events of capturing the images of the user

device and correlating the sensor sequence by converting the set of images to data representing

the captured set of images in order to authenticate the user of the gesturing instrument

(paragraph 027). Starner also teaches the use of a gesture to authorize a physical security action

such as opening a door (paragraph 0035, 0038). Starner et al. is however not explicit in teaching

the plurality of gesture sensors mounted on a panel in a two dimensional array. Pryor in an art

related machine interface invention teaches the mounting of gesture sensors (109, 108, 100, 101)

on a panel (138) for detecting a gesture (col. 2 lines 32-41).

It would have been obvious to one of ordinary skill in the art for the gesture sensors of

Starner et al. to be mounted on a two-dimensional array as disclosed by Pryor because this

provides for the accurate determination of the pointing vector, the position and the orientation of

the gesture device in order to determine the command indicated by the gesture.

Regarding claim 2, Starner et al. teaches discrete outputs are generated over time from

the gesture (paragraph 035) which inherently include timing analysis to correlate the gesture with

time of capture.

Regarding claim 3, Sterner et al. teaches decoding a command from a gesture (paragraph

027) but is silent on teaching the authorized sequence is use in authorizing a financial

transaction. Pryor in an art related machine interface invention teaches detecting signature from

a free-space gesture (col. 9 lines 4-29) and the detected signature is used to authorize a financial

transaction (col. 9 lines 4-10) in order to add a degree of security to the system to ensure the

authenticity of the signature.

It would have been obvious to one of ordinary skill in the art for the authorized gesture

sequence to be use in authorizing a financial transaction in Starner et al as disclosed by Pryor

because detecting signature from a free-space gesture and the detected signature is used to

authorized a financial transaction in order to add a degree of security to the system to ensure the

authenticity of the signature.

Regarding claims 10, 13-15, Starner et al. teaches a method detecting free-space gesture

comprising the steps of providing a panel (103) having a plurality of sensors such as plurality of

lenses or a plurality of mirrors mounted on a control system and the sensors are adapted to detect

a gesturing instrument (101) in proximity to the sensors (paragraph 020). Starner et al. teaches

determining a sensor sequence from a series of sensor detection events of capturing the images

of the user device and correlating the sensor sequence by converting the set of images to data

representing the captured set of images in order to authenticate the user of the gesturing

instrument (paragraph 027). Starner also teaches the use of a gesture to authorize a physical

security action such as opening a door (paragraph 0035, 0038). Starner also teaches a computer

(104) which includes a processor and memory (paragraph 021) receiving the detected gestures

(paragraph 025) but is not explicit in teaching a computer readable medium encoded with

medium for detecting free space gesture signature. The reference of Pryor teaches a computer

which include software used for detecting free space gesture and correlate the sensor sequence to

a predetermine sequence in order to authenticate a user (col. 2 lines 23-52).

It would have been obvious to one of ordinary skill in the art to have a computer

readable medium encoded with medium for detecting free space gesture signature because the

function of detecting a gesture and correlate the sensor sequence to a predetermine sequence in

order to authenticate a user required processing power which can only be provided by a
computer.

Regarding claim 11, Starner et al. teaches discrete outputs are generated over time from
the gesture using a computer (paragraph 035) which inherently include timing analysis to
correlate the gesture with time of capture and the computer inherently include software for
performing the gesture recognition functions.

Regarding claims 12, and 21 Sterner et al. teaches decoding a command from a gesture
(paragraph 027) but is silent on teaching the authorized sequence is use in authorizing a financial
transaction. Pryor in an art related machine interface invention teaches detecting signature from
a free-space gesture (col. 9 lines 4-29) and the detected signature is used to authorize a financial
transaction (col. 9 lines 4-10) in order to add a degree of security to the system to ensure the
authenticity of the signature. The reference of Pryor teaches a computer which include software
used for detecting free space gesture and correlate the sensor sequence to a predetermine
sequence in order to authenticate a user (col. 2 lines 23-52).

It would have been obvious to one of ordinary skill in the art to have a computer
program for using the authorized gesture sequence for authorizing a financial transaction in
Starner et al as disclosed by Pryor because detecting signature from a free-space gesture and the
detected signature is used to authorized a financial transaction in order to add a degree of
security to the system to ensure the authenticity of the signature.

Regarding claim 19, Starner et al. teaches a method detecting free-space gesture

comprising the steps of providing a panel (103) having a plurality of sensors such as plurality of

lenses or a plurality of mirrors mounted on a control system and the sensors are adapted to detect

a gesturing instrument (101) in proximity to the sensors (paragraph 020). Starner et al. teaches

determining a sensor sequence from a series of sensor detection events of capturing the images

of the user device and correlating the sensor sequence by converting the set of images to data

representing the captured set of images in order to authenticate the user of the gesturing

instrument (paragraph 027). Starner also teaches the use of a gesture to authorize a physical

security action such as opening a door (paragraph 0035, 0038)

Regarding claim 20, Starner et al. teaches discrete outputs are generated over time from

the gesture using a computer (paragraph 035) which inherently include timing analysis to

correlate the gesture with time of capture and the computer includes a processor.

Regarding claims 23-24, Starner et al. teaches the gesture system is used to actuate a

door lock (paragraph 0035, 0038) and the actuation of a door allow the removal of items from a

secure area.

Claims 4, 6-7, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Starner et al. US Patent 20020071277 in view of Pryor US Patent 6750848 and further in view of

Pond et al. US Patent Application Publication 20040030601.

Regarding claims 4, 6, and 22 Starner et al. teaches decoding a command from a gesture and authorized a physical security action of unlocking a of unlocking a door (see response to claim 1) and one skilled in the art further recognizes that the unlocking of a door allow a person to transport an item from a secured area but is silent on teaching physical security action of unlocking a fuel pump. Pond et al. in an art related payment method for a mobile device invention teaches the use of gestures as input in a payment system (paragraph 0084) and the system of purchase includes a gas dispenser (paragraph 0087) in order to allow a convenient method of payment at the pump.

It would have been obvious to one of ordinary skill in the art to have a sequence is used to authorize a physical security action and the physical security action comprises unlocking a door or a fuel pump door in Starner et al. as disclosed Pond et al. because this allows the generation of control information without any physical contact and provides a convenient command and control interface.

Regarding claims 7 and 25, Starner et al. teaches the use of sensors to detect move of the gesturing instrument (paragraph 020) but is silent on teaching the use of RFID sensors to detect the gesture device. Pond et al. in an art related payment method for a mobile device invention teaches the use of an array of RFID sensors to detect the gesture of a RFID (paragraph 0084).

It would have been obvious to one of ordinary skill in the art to modify the system of Starner as disclosed by Pond et al. because the use of RFID sensors to detect the gesture of a RFID device represents an alternative to the gesture detection system as disclosed by Starner et al.

Claims 8 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Starner
et al. US Patent 20020071277 in view of Pryor US Patent 6750848 in view of Hiroaki US
Patent 6661425 and further in view of Lawrence US Patent 3580058.

Regarding claims 8 and 26 Starner et al. teaches an array of sensors to detect gestures
(paragraph 020) but is silent on teaching the use of an array of acoustic sensors to detect the
gesturing instrument. Hiroaki in an art related sensor system teaches the use of acoustic sensors
to detect gestures (col. 17 lines 29-33). Lawrence in an art related sensor system teaches
arranging acoustic sensors to produce acoustic mismatches for generating reflective pulses (col.1
lines 43-50) for indicating the acoustic characteristic of the sensors.

It would have been obvious to one of ordinary skill in the art to modify the system of
Starner as disclosed by Hiroaki in view of Lawrence because the array of acoustic sensors for
detecting gestures represents an alternative to the gesture detection system as disclosed by
Starner et al.

Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Starner
et al. US Patent Application Publication 20020071277 in view of Pryor US Patent 6750848 and
further in view Fleck et al. US Patent 6556190.

Regarding claims 9 and 27, Starner et al. teaches an array of sensors to detect gestures
(paragraph 020) but is silent on teaching providing an array of infrared (IR) sensors adapted to
detect movement of gesturing instrument that are distinguishable by heat. Fleck et al. in an art
related coordinate input device teaches the use of IR sensors that are distinguishable by heat (col.
7 lines 59-64) and therefore provides an alternating detecting means to the ultrasonic sensors.

It would have been obvious to one of ordinary skill in the art to provide an array of

infrared (IR) sensors adapted to detect movement of gesturing instrument which are

distinguishable by heat in Starner et al. because this represents an alternative to the sensory

detection means disclosed by Starner et al.

Claim 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Starner et al. US

Patent 20020071277 in view of Pryor US Patent 6750848 and further in view of Pond et al. US

Patent Application Publication 20040030601

Regarding claim 16, Starner et al. teaches the use of sensors to detect move of the

gesturing instrument (paragraph 020) but is silent on teaching the use of RFID sensors to detect

the gesture device. Pond et al. in an art related payment method for a mobile device invention

teaches the use of an array of RFID sensors to detect the gesture of a RFID (paragraph 0084).

Pond et al also teaches the use of servers to provide authentication (paragraph 032) and the

servers inherently include software for providing this function.

It would have been obvious to one of ordinary skill in the art to modify the system of

Starner as disclosed by Pond et al. because the use of RFID sensors to detect the gesture of a

RFID device represents an alternative to the gesture detection system as disclosed by Starner et

al.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Starner et al. US

Patent 20020071277 in view of Pryor US Patent 6750848 in view of Hiroaki US Patent

6661425 and further in view of Lawrence US Patent 3580058.

Regarding claim 17 Starner et al. teaches an array of sensors to detect gestures

(paragraph 020) but is silent on teaching the use of an array of acoustic sensors to detect the

gesturing instrument. Hiroaki in an art related sensor system teaches the use of acoustic sensors

to detect gestures (col. 17 lines 29-33). Lawrence in an art related sensor system teaches

arranging acoustic sensors to produce acoustic mismatches for generating reflective pulses (col.1

lines 43-50) for indicating the acoustic characteristic of the sensors. The reference of Pryor

teaches a computer which include software used for detecting free space gesture and correlate the

sensor sequence to a predetermine sequence in order to authenticate a user (col. 2 lines 23-52).

It would have been obvious to one of ordinary skill in the art to modify the system of

Starner as disclosed by Hiroaki in view of Lawrence because the array of acoustic sensors for

detecting gestures represents an alternative to the gesture detection system as disclosed by

Starner et al. and a software program is necessary to control the computer for providing the

processing power for authenticating the gesture.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Starner et al. US

Patent Application Publication 20020071277 in view of Pryor US Patent 6750848 and further in

view Fleck et al. US Patent 6556190.

Regarding claim 18, Starner et al. teaches an array of sensors to detect gestures

(paragraph 020) but is silent on teaching providing an array of infrared (IR) sensors adapted to

detect movement of gesturing instrument that are distinguishable by heat. Fleck et al. in an art

related coordinate input device teaches the use of IR sensors that are distinguishable by heat (col.

7 lines 59-64) and therefore provides an alternating detecting means to the ultrasonic sensors.

The reference of Pryor teaches a computer which include software used for detecting free space

gesture and correlate the sensor sequence to a predetermine sequence in order to authenticate a user (col. 2 lines 23-52).

It would have been obvious to one of ordinary skill in the art to provide an array of infrared (IR) sensors adapted to detect movement of gesturing instrument which are distinguishable by heat in Starner et al. because this represents an alternative to the sensory detection means disclosed by Starner et al. and a software program is necessary to control the computer for providing the processing power for authenticating the gesture.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U. Brown whose telephone number is 571-272-3060. The examiner can normally be reached on 8:30-7:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vernal Brown
March 29, 2007

BRIAN ZIMMERMAN
PRIMARY EXAMINER